

CLIMATE DIAGNOSTICS CENTER

Boulder, Colorado

Mission

The mission of the Climate Diagnostics Center (CDC) is to develop national capabilities to analyze, interpret, and forecast important climate variations on time scales ranging from a few weeks to centuries. To achieve its mission, CDC develops and applies a wide range of research methods, particularly emphasizing state-of-the-art diagnostic techniques, to elucidate fundamental processes governing climate phenomena such as droughts, floods, and the El Niño-Southern Oscillation, and to identify the causes of longer-term (decadal to centennial) climate variations. CDC also performs extensive intercomparisons of observational and climate model data, an activity vital to improving current research and prediction models.

The development of improved climate assessments and predictions enhances the Nation's economic and environmental security, and is a fundamental part of NOAA's mission. Diagnostic studies, for which CDC has exceptional breadth and expertise, vitally contribute to this process by linking basic observational and theoretical research to improvements in operational climate predictions and, ultimately, to the development of new climate products that better serve the needs of the public and decision-makers

History and Organization

CDC was formed in 1993 through a Memorandum of Agreement (MOA) between the Office of Oceanic and Atmospheric Research (OAR) and the Office of Global Programs (OGP), with personnel derived from what had formerly been the Climate Research Division of the Climate Monitoring and Diagnostics Laboratory. The purpose of the OAR-OGP agreement was to establish a unique, focused center of expertise within NOAA to develop and apply diagnostic methods that would (i) aid in understanding the dominant processes influencing climate variability, and (ii) link observational analyses to model testing and evaluation. Under the terms of the MOA, CDC is managed as one of the Research Laboratories in OAR.

CDC is staffed by NOAA personnel and affiliated scientists from the University of Colorado Cooperative Institute for Research in Environmental Sciences (CIRES), with approximately forty CIRES staff and fourteen federal staff directly affiliated with CDC. In order to more explicitly recognize this large and focused set of joint activities, a University Center within CIRES, also named the Climate Diagnostics Center, was formed in 1997. This organization integrates and coordinates climate research in NOAA/OAR and CIRES with other existing University research and instructional programs, thereby enhancing prospects for mutually beneficial collaborations among NOAA and University scientists over a broad range of disciplines.

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Financial Profile (In thousands of dollars)

Fiscal Year	Permanent Funding	Other NOAA	Non- NOAA	Pass Through	TOTAL *
FY 2001	1449	3315	176	0	4940
FY 2002	1659	3572	78	0	5309
FY 2003	1643	3939	129	0	5711

* Note: This is total funding to NOAA-CDC. It does not include any grant funds provided to the University of Colorado for CIRES principal investigators affiliated with CDC.

Personnel Data

FY	FEDERAL EMPLOYEES	JOINT INSTITUTE	Contractors	TOTAL
FY 1999	10	45	0	55
FY 2000	15	38	0	53
FY 2001	15	37	0	52
FY 2002	14	42	0	56
FY 2003	14	42	0	56

Average Age Federal/Scientific/Engineering and Technical Staff 47.9 years

Average Age of JI/Scientific/Engineering and Technical Staff 38.8 years

Federal Staff	PhD	62% MS	8%
JI Staff	PhD	57% MS	31%

CLIMATE DIAGNOSTICS CENTER PARTNERSHIPS

PARTNERSHIPS	IDENTIFY (and explain)
JOINT INSTITUTES	CIRES/UC, CIRA/CSU, CIASTA/DRI/UCCSN, JIMO/Scripps Institute of Oceanography/UCSD Collaborative research projects in support of NOAA strategic plan goals
PARTNERSHIPS WITH OTHER LABS	ETL, GFDL, FSL, PMEL, AOML Collaborative research projects supporting NOAA mission goals to address national needs
OTHER OAR PROGRAMS	OGP-RISA Program, International Research Institute for Climate Prediction (IRI), Climate Observations and Services Program. Applied research projects supporting NOAA and OAR mission goals
OTHER NOAA RELATIONSHIPS	NWS/NCEP, NWS/CSD, NWS/CBRFC, NWS/WRCO, NESDIS/NCDC, NESDIS/WRCC Applied research supporting the operations of other NOAA line offices
OTHER FEDERAL AGENCIES	NSF, NASA, DOE, USBR, USDA, DOD, DOI, USGS Collaborative research projects in support of the Strategic Plan for the U.S. Climate Change Science Program
STATE AGENCIES	Western Governors Association, Colorado Water Conservation Board, Colorado Climate Center and the Colorado State Climatologist Office, Colorado Agriculture Cooperative Extension Services Experimental climate products and services to provide information and decision support tools for proactive planning, impact mitigation, informed decision making, and education.
LOCAL PARTNERSHIPS	National Center for Atmospheric Research (NCAR), Hydrosphere, Denver Water Board, Northern Colorado Water Conservancy District, Aspinall Unit of Upper Colorado Coordinated Reservoir Operations, Colorado Water Availability Task Force (Governor's Drought Task Force), Colorado River Water Conservation District, National Drought Mitigation Center (Lincoln)

	Collaborative projects to enhance the understanding and prediction of climate variability and change, and experimental climate services to improve the use and usefulness of NOAA climate information to address public and private sectors needs
UNIVERSITY PARTNERSHIPS	<p>University of Colorado, Colorado State University, University of Massachusetts, University of Arizona, University of South Florida, University of Nebraska, University of California at San Diego, University of Texas, University of Madrid, University of Bologna, University of Sonora in Hermosillo, Universidad Nacional Autónoma de México, University of the West Indies in Jamaica, University of Colombia at Medellin.</p> <p>Collaborative research projects to enhance understanding and predictions of climate variability and change, development of experimental climate products and services</p>
INTERNATIONAL	<p>Intergovernmental Panel on Climate Change (IPCC), World Meteorological Organization (WMO), International Geosphere-Biosphere Programme (IGBP), European Centre for Medium-Range Weather Forecasts (ECMWF), Inter-American Institute for Global Change Research (IAI), Istituto Nazionale di Geofisica e Vulcanologia (INGV), Coordinación de Tecnología Hidrológica, Mexican Weather Service, Instituto Mexicano de Tecnología del Agua (IMTA)</p> <p>Collaborative activities representing NOAA and national interests in international research programs, research to enhance understanding and prediction of climate variability and change, development of experimental climate products and service to address multilateral needs.</p>

